Montana Department of Fish, Wildlife & Parks
1400 South 19th Avenue, Bozeman, MT 59718

Environmental Assessment (8/21/07 draft)

North Fork of Everson Creek Westslope Cutthroat Trout Conservation Project: Removal of Nonnative Trout

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action:

The proposed action is to remove nonnative brook trout (*Salvelinus fontinalis*) from the upper reaches of the North Fork of Everson Creek using mechanical methods including electrofishing and trapping. The project is intended to secure a native westslope cutthroat trout (WCT) (*Oncorhynchus clarki lewisi*) population by eliminating competition from brook trout.

2. Agency Authority for the Proposed Action

- Montana Fish, Wildlife & Parks (FWP) is required by law to implement programs that manage sensitive fish species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list the species under 87-5-107 or the federal Endangered Species Act. Section 87-1-201(9)(a), M.C.A.

- FWP signed the Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana (FWP 1999) which states: "The management goal for WCT in Montana is to ensure the long-term, self sustaining persistence of the subspecies within each of the five major river drainages they historically inhabited in Montana, and to maintain genetic diversity and life history strategies represented by the remaining local populations."

3. Name of Project

North Fork of Everson Creek Westslope Cutthroat Trout Conservation Project: Removal of Nonnative Trout

4. Project Construction and Completion

Estimated Construction/Commencement Date:

- Nonnative brook trout would be initially removed in the fall of 2007.

Estimated Completion Date:

- Removal efforts would continue until brook trout are eradicated from the project reach. Similar mechanical removal efforts in like size streams have typically taken 3 – 5 years to complete.

5. Location Affected by Proposed Action (county, range and township)
North Fork of Everson Creek, Beaverhead County, T11S R14W

6. Number of acres that would be directly affected that are currently:

1. Developed/ residential – 0 acres
2. Industrial – 0 acres
3. Open space – 0 acres
4. Wetland/ riparian – < 1 acre
5. Floodplain – 0 acres
6. Irrigated cropland – 0 acres
7. Dry cropland – 0 acres
8. Forestry – 0 acres
9. Rangeland – 0 acres
10. Other – 2.0 miles of stream

7. Map/site plan: See Figure 1.

8. Local, State or Federal Agencies that have overlapping or additional jurisdiction.

The Bureau of Land Management (BLM), Dillon Field Office, manages lands adjacent to the proposed project reach on the North Fork of Everson Creek. Along with FWP, the BLM is a cosigner of a Memorandum of Understanding and Conservation Agreement (MOU; FWP 1999) that outlines measures necessary for conservation of WCT in Montana. The MOU states that cosigners agree to "protect all genetically pure WCT populations", and that conservation actions may include isolation from, and suppression or eradication of "introduced species that compete with, hybridize with, or prey on genetically pure WCT".

(a) Permits:

No permits are necessary for mechanical nonnative trout removal efforts.

(b) Funding:

FWP and the BLM would be cooperators in implementing and funding this project. Funding would include resources that are currently allocated by FWP and the BLM towards WCT conservation efforts, and may include other resources (e.g., Future Fisheries Grant Program) that would be applied for if additional resources become necessary. Anticipated resource needs are detailed on page 11.

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Name	Type of Responsibility
Bureau of Land Management, Dillon Field Office	Management of federal lands within the NF of Everson Creek drainage

9. Summary of the proposed action

Need for the Proposed Action

Westslope cutthroat trout, Montana's state fish, has declined in abundance, distribution, and genetic diversity throughout its native range (Shepard et al. 2003). Reduced distribution of WCT is particularly evident in the Missouri River drainage of Montana where genetically pure populations are estimated to persist in about 5% of habitat they historically occupied. Major factors contributing to this decline include competition with nonnative brook, brown (*Salmo trutta*) and rainbow trout (*O. mykiss*) that were first introduced to Montana in the 1890's, hybridization with rainbow and Yellowstone cutthroat trout (*O. c. bouvieri*), habitat changes, and isolation to small headwater streams. Due to these threats, most remaining WCT populations in the Missouri River drainage are considered to have a low likelihood of long-term (100 years) persistence unless conservation actions are implemented (Shepard et al. 1997).

The NF of Everson Creek, a small tributary to the Horse Prairie Creek near Grant, MT (Figure 1), maintains one of the remaining 23 genetically pure WCT populations in the Red Rock River drainage. WCT occupy about 3.5 miles of the NF of Everson, but are only common in the uppermost 1.5 miles of stream. This upper reach is isolated by a natural barrier that has prevented invasion from nonnative brook trout (see figure 1). Below the barrier, WCT are rare and greatly outnumbered by brook trout for about 2 stream miles, at which point the stream becomes intermittent and few fish are present. The WCT population likely includes fewer than 500 individuals (age-1 and older).

High densities of brook trout below the natural barrier is the likely reason for WCT being rare in the lower reach of the NF of Everson Creek. Brook trout displacement of WCT is common where the species range overlap, and is recognized as an important reason for the loss of many WCT populations. This displacement has been attributed to a size and competitive advantage young brook trout incur due to timing of reproduction (Shepard and Nelson 2004). Without efforts to control brook trout, it is probable that over time they will completely displace WCT from the lower sections of the NF of Everson Creek, although the timeframe for this is unknown.

While WCT are currently protected by the barrier in uppermost reach of the NF of Everson Creek, it is believed that this section of stream is not sufficient to maintain the population over the long-term. WCT populations that occupy small headwater streams are particularly vulnerable to fire, severe drought and extreme floods that could result in rapid local extirpation. Over the long-term, the small NF of Everson Creek population could also be prone to inbreeding depression, and if the natural barrier were to fail, from competition with brook trout.

Preservation of remaining WCT populations, like in the NF of Everson Creek, is the primary strategy for conservation of WCT in Montana (MOU 1999). Few WCT populations are considered "secure" in the upper Red Rock River drainage, and efforts to protect remaining populations are necessary to ensure continued persistence of the species in the basin. These rare local populations maintain the remaining genetic diversity of the species, and each may perpetuate adaptive traits that are important to the species as whole (Leary et al. 1998). For these reasons, these populations will be an invaluable source for restoring WCT to streams they once occupied, and their disappearance would be a significant loss for

WCT conservation efforts.

Summary of Proposed Action

The proposed action is to remove, and potentially eradicate, nonnative brook trout from a two mile reach of the NF of Everson Creek (Figure 1), using mechanical collection methods including electrofishing and trapping. The proposed effort is expected to provide short-term and long-term benefits to the WCT population by reducing competition from brook trout, which will allow increases in the distribution and abundance of WCT. A barrier to upstream fish migration would be placed at the lower end of the project area to prevent additional movement of nonnative trout into the drainage.

Electrofishing would be the primary method to capture and remove brook trout from the project area. Electrofishing is a common fish collection technique where battery or generator produced electricity is applied to a stream to stun and collect fish. Electrofishing has been used in several WCT conservation efforts in Montana to eradicate brook trout from streams similar in size to the NF of Everson Creek (Shepard and Nelson 2004). Specifically, brook trout removal efforts would include one to three, 3-man crews using backpack electrofishing equipment to capture fish. The entire project reach would be electrofished over a 3 or 4 day period, and 1 to 4 periods per year depending on the number of brook trout captured. Removal efforts would typically occur during late summer or fall after WCT have spawned and fry have emerged. Brook trout may also be captured by placing small, funnel-shaped traps in the stream during September and October when they are spawning. All captured WCT would be returned to the stream.

Because the NF of Everson is relatively small, typically 5 – 7 ft. in width, removals efforts are expected to be highly efficient, and brook trout abundance should be significantly reduced (> 90%) within 1 or 2 years. Removal efforts would continue until brook trout are eradicated from the project reach, likely within 3 to 5 years. Captured brook trout will be euthanized and disposed of on-site. The relocation of collected brook trout to other areas within the Everson Creek drainage, or other streams, would be harmful to fish populations already persisting in those areas by increasing competition for limited habitat. Transfer of brook trout to other streams would also include the potential of introducing pathogens into those waters. All captured WCT would be released back into the stream.

A barrier to upstream moving fish would also be constructed at the lower end of the project reach to prevent recolonization by nonnative trout. The barrier will be created by modifying an existing culvert at a road crossing (FS 3918) on BLM managed lands. The BLM is the lead agency for the barrier construction and has completed the necessary National Environmental Protection Act (Everson Creek Fish Barrier Environmental Assessment, MT-050-05-07; Paul Hutchinson, Dillon BLM, 406-683-8052) and permitting processes.

Benefits of the Proposed Project

The primary purpose of this project is to help achieve the goal of ensuring the long-term, self-sustaining presence of WCT in the upper Missouri River drainage by securing a genetically pure WCT population in the NF of Everson Creek. With successful removal of nonnative brook trout, the benefits of the proposed effort would include:

- Securing a rare, upper Missouri River WCT population. The NF of Everson Creek WCT population would be expected to increase from fewer than 500 fish currently, to 1000 – 1500

fish with eradication of brook trout.

- Fulfilling the State's obligation to protect all genetically pure WCT populations (FWP 1999).
- Preserving a genetically pure WCT population that may be used as a donor source to help establish WCT in additional streams.
- Reducing threats that may encourage requests for listing WCT under the Endangered Species Act.

10. Agencies consulted during preparation of the EA:

- Montana Fish, Wildlife & Parks, Bozeman, Dillon, Helena and Townsend
- Bureau of Land Management, Dillon Field Office, Dillon
- U.S. Forest Service, Beaverhead-Deerlodge National Forest, Dillon

PART II. ENVIRONMENTAL REVIEW

1. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Soil instability or changes in geologic substructure?		x				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?		X				
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X		Yes	1d.
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other: N/A						

Comment 1d. Minor pruning of brush along and over the stream channel, and removal of some overhanging logs would occur to permit better access to the stream and increase electrofishing efficiency. No vegetation will be killed, and logs that are clearly associated with channel stability (i.e., keyed into stream bed or bank) will not be removed.

2. AIR Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))		X				
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a)		X				
f. Other: N/A						

3. WATER **Will the proposed action result in:**	**IMPACT ∗**				**Can Impact Be Mitigated∗**	**Comment Index**
	Unknown ∗	**None**	**Minor ∗**	**Potentially Significant**		
a. ∗Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. ∗∗∗∗For P-R/D-J, will the project affect a designated floodplain? (Also see 3c)		X				
m. ∗∗∗For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a)		X				
n. Other: N/A						

4. VEGETATION Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				4a.
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X				
f. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				
g. Other: N/A						

Comment 4a. Minor pruning of brush along and over the stream channel, and removal of some overhanging logs would occur to permit better access to the stream and increase electrofishing efficiency. No vegetation will be killed, and logs that are clearly associated with channel stability (i.e., keyed into stream bed or bank) will not be removed.

** 5. FISH/WILDLIFE Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?			X		No	5a
b. Changes in the diversity or abundance of game animals or bird species?			X		No	5b
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)		X				
i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)		X				
j. Other: N/A						

Comment 5a. Removal of some over-hanging logs and pruning of woody vegetation is proposed to increase electrofishing efficiency for removal of nonnative trout. This is anticipated to be a minor and short-term impact to remaining fish for several reasons: vegetation will rapidly re-grow, logs associated with the channel will not be removed, and the stream will remain shaded from trees not impacted by woody vegetation pruning.

Comment 5b. The proposed action is expected to result in an increase in native WCT abundance and a decrease in nonnative brook trout abundance in the NF of Everson Creek. This is considered a minor impact because brook trout will continue to be abundant in numerous streams in the Red Rock River drainage. The project is intended to increase the abundance and range of WCT, a rare and unique resource with limited distribution in the Missouri River drainage. Westslope cutthroat trout are currently protected by catch-and-release regulations in most streams in the central fish district, including the NF of Everson Creek. Restoration efforts like the proposed action are intended to increase overall WCT abundance, which may result in greater fishing opportunities and harvest for this rare native species.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS **Will the proposed action result in:**	**IMPACT ∗**				**Can Impact Be Mitigated ∗**	**Comment Index**
	Unknown ∗	**None**	**Minor ∗**	**Potentially Significant**		
a. Increases in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other: N/A						

7. LAND USE **Will the proposed action result in:**	**IMPACT ∗**				**Can Impact Be Mitigated ∗**	**Comment Index**
	Unknown ∗	**None**	**Minor ∗**	**Potentially Significant**		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other: N/A						

8. RISK/HEALTH HAZARDS **Will the proposed action result in:**	**IMPACT ∗**				**Can Impact Be Mitigated ∗**	**Comment Index**
	Unknown ∗	**None**	**Minor ∗**	**Potentially Significant**		
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. ***For P-R/D-J, will any chemical toxicants be used? (Also see 8a)		X				
e. Other: N/A						

9. COMMUNITY IMPACT Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:						

10. PUBLIC SERVICES/TAXES/UTILITIES Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased used of any energy source?		X				
e. **Define projected revenue sources			X		No	10e
f. **Define projected maintenance costs.			X		No	10e
g. Other:						

Comment 10e. This project would be part of the larger WCT conservation program in FWP Region-3, and would be primarily implemented by FWP staff dedicated to such efforts. The FWP Region-3 WCT conservation program is funded through FWP, federal (U.S. Forest Service and Bureau of Land Management), and private (Montana Trout Unlimited) dollars. The BLM is the lead agency for barrier design, funding, and installation, and would participate in some aspects of the brook trout removal efforts. Expected labor demands for the removal efforts would be 25 – 75 man-days per year until brook trout are eradicated from the project reach, which is anticipated in 3 – 5 years.

** 11. AESTHETICS/RECREATION Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)			X		Yes	11c.
d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)		X				
e. Other:						

Comment 11c. Angling and harvest opportunities for brook trout would be reduced in the upper reaches of the NF of Everson Creek. However, brook trout will still be common in the Horse Prairie Creek drainage, and high quality brook trout fisheries are common in the Red Rock River basin. Anglers will still be permitted to fish for WCT in the NF of Everson Creek, but are currently required to release captured WCT. Restoration efforts like the proposed action are intended to increase overall WCT abundance, which may result in greater fishing opportunities and harvest for this rare native species. Therefore, the impact is minor and temporary.

12. CULTURAL/HISTORICAL RESOURCES Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ****For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)		X				
e. Other:						

SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e)		X				
g. ****For P-R/D-J, list any federal or state permits required.		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):

PART II. ENVIRONMENTAL REVIEW, CONTINUED

2. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Two alternatives were considered during the preparation of this EA

1) No Action

The predicted consequences of the "No Action" alternative are:

- Competition from nonnative brook trout would not be decreased in a two mile reach of the NF of Everson Creek, and the possibility of a genetically pure, local WCT population ultimately becoming extirpated due to this and associated threats would remain high.
- No costs associated with brook trout removal efforts.

2) **Preferred Alternative:** Removal of nonnative brook trout from the proposed project reach in the NF of Everson Creek (proposed action).

The predicted consequences of the Preferred Alternative were detailed and discussed in Part I and Part II.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None

PART III. NARRATIVE EVALUATION AND COMMENT

Addressed in Part I and Part II

PART IV. EA CONCLUSION SECTION

1. Based on the significance criteria evaluated in this EA, is an EIS required (YES/NO)? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

No. An EIS is not required under the Montana Environmental Policy Act (MEPA) because the project lacks significant impacts to the physical or human environment. Therefore, the impacts are appropriately addressed through an Environmental Assessment. The primary impact associated with the project is reduced abundance and distribution of nonnative trout in a two mile reach of the NF of Everson Creek, which is the intended consequence of the action.

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The public will be notified through local newspapers and through contact with local sports groups and others who have previously indicated interest in similar projects. This EA will also be published on the Montana Fish, Wildlife & Parks web page (http://fwp.mt.gov/default.html). Public comments can be given at the FWP web page, or in writing to: Lee Nelson, Montana Fish, Wildlife & Parks, 415 South Front Street, Townsend, MT 59644, or email: leenelson@mt.gov. Comments on the EA will be accepted until 5:00 pm, October 1, 2007. Please include name and address with any comment. This level of public involvement is believed adequate for the proposed project, as similar and recent efforts in the Dillon Area (Dyce Creek) and the Elkhorn Mountains near Helena, have produced no significant issues or controversy. If significant concerns are raised concerning this EA, a public open house to discuss the issues will be scheduled.

3. Duration of comment period

The public comment period for this proposal is from September 7, 2007, October 8, 2007. Written comment can be mailed to:

Lee Nelson
Montana Fish, Wildlife & Parks
415 South Front Street
Townsend, MT 59644
E-mail: leenelson@mt.gov

4. Name, title, address and phone number of the person(s) responsible for preparing the EA:

Lee Nelson
Fisheries Biologist
Montana Fish, Wildlife & Parks
415 South Front Street
Townsend, MT 59644
Phone: 406-495-3866
E-mail: leenelson@mt.gov

References

FWP. 1999. Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana. Montana Fish, Wildlife and Parks, Helena, Montana.

Leary, R.F., B.B. Shepard, B.W. Sanborn, W. P. Dwyer, J.A. Brammer, R.A. Oswald, A. Tews, D. Kampwerth, M. Enk, R. Wagner, L. Kaeding. 1998. Genetic Conservation of Westslope Cutthroat Trout in the Upper Missouri River Drainage. Prepared by: The Upper Missouri Westslope Cutthroat Trout Committee. Montana Fish, Wildlife and Parks, Helena, Montana.

Shepard, B. B., B. Sanborn, L. Ulmer and D.C. Lee. 1997. Status and risk of extinction for westslope cutthroat trout in the upper Missouri River Basin. North American Journal of Fisheries Management 17:1158-1172.

Shepard, B. B., B.E. May and W. Urie. 2003. Status of Westslope Cutthroat Trout in the United States: 2002. Montana Fish, Wildlife and Parks for the Westslope Cutthroat Trout Interagency Conservation Team, Helena, Montana.

Shepard, B.B and L. Nelson. 2004. Conservation of Westslope Cutthroat Trout by Removal of Brook trout Using Electrofishing. Report to Montana Fish, Wildlife and Parks Future Fisheries Improvement Program, Helena, Montana.

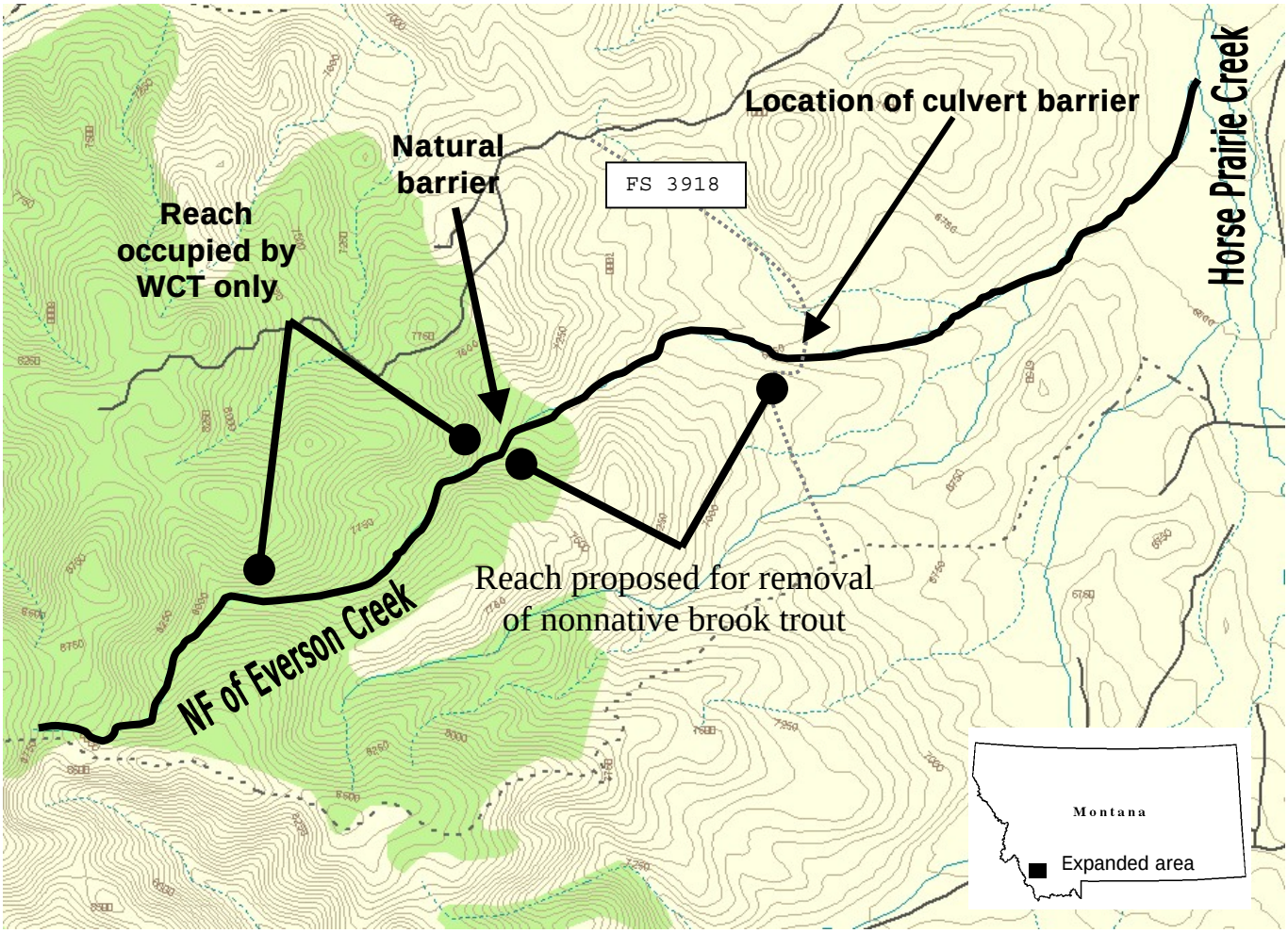

Figure 1. Map of proposed WCT project area in the NF of Everson Creek, near Grant, MT. Map scale: one inch equals one mile.